

REMARKS

Status of Claims

Claims 1-18 are pending, of which claim 1 is independent.

Claims 1, 3-5 and 7-8 have been amended to correct informalities in the claim language and to more clearly define the claimed subject matter. Claims 11-18 have been added. Care has been taken to avoid introducing new matter.

Double Patenting Rejection

Claims 1-10 were provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 18-32 of co-pending Application No. 10/576,518. Applicants respectfully submit that a terminal disclaimer is being concurrently filed herewith. Accordingly, it is requested that the Examiner withdraw the rejection of claim 1-10 on the ground of nonstatutory obviousness-type double patenting.

Rejection under 35 U.S.C. § 103(a)

Claims 1-10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Yasuno et al. (US 2003/0026443). This rejection is respectfully traversed for at least the following reasons.

Applicants respectfully submit that, at a minimum, Yasuno fails to disclose that “the air gap is formed by removing a sacrificial film formed between the first film and the second film” and it would not have been obvious to modify Yasuno to arrive at the claimed subject matter because Yasuno fails to disclose or recognize the problems disclosed in the present disclosure, and moreover modifying Yasuno would impair the function of the microphone of Yasuno.

One of the objectives of the present disclosure is to prevent adhesion between the first electrode in the first film and the second electrode in the second film when removing the sacrificial film, which has been previously formed between the first film and the second film. Accordingly, in the present disclosure, when the first insulating film and the second insulating film are arranged so as to face the air gap, adhesion between the first electrode and the second electrode can be prevented by using a sacrificial layer (see, paragraphs [0006] and [0007] of the present specification).

Turning to the cited reference, Applicants respectfully submit that, at a minimum, Yasuno fails to disclose the above identified features of claim 1. Applicants also respectfully disagree the Examiner's assertion that "since the air gap 8 formed in the insulating film 4 is shown in Yasuno et al., a skilled person can easily reach forming an air gap by removing part of the insulating film 4."

First, Applicants respectfully submit that modifying Yasuno to arrive at the claimed subject matter would impair the function of the microphone of Yasuno. The condenser microphone of Yasuno is manufactured by individually forming parts constituting the condenser microphone as elements, and then assembling the parts (see, paragraphs [0010] and [0052] of Yasuno). More specifically, the parts, such as the conductive diaphragm 3, the spacer 4 having a hole in its center (which serves later as the air gap 8), the conductor fixed electrode 5, the diaphragm plate ring 2, and the like are first prepared. Then, the conductive diaphragm 3 is placed on the diaphragm plate ring 2. The spacer 4 is placed on the conductive film 3. The conductor fixed electrode 5 is placed on the spacer 4. By this series of assembling of the parts, the condenser microphone of Yasuno is manufactured. Therefore, it is impossible to form the air gap as the hole in the spacer 4 after the assembling where the hole is not formed in the spacer 4

before the assembling. In other words, formation of the air gap after assembling would break the condenser microphone of Yasuno. As such, it is clear that it would not have been obvious for a skilled person to arrive at the subject matter of claim 1 from the teaching of Yasuno because it would impair the function of the microphone of Yasuno.

Second, Applicants submit that Yasuno fails to recognize or even suggest the adhesion problem between the first electrode and the second electrode. The characteristic of the technologies disclosed in Yasuno lies in that “in order to eliminate a deficiency caused by forming an electret by ion injection to a dielectric film before assembling parts into a microphone (see, paragraphs [0008] and [0009] of Yasuno), ions are injected to the dielectric film after assembling the parts into the microphone, thereby forming an electret (see, paragraphs [0045], [0046], [0055] and [0056] of Yasuno). Accordingly, the technologies in Yasuno, in which the condenser microphone is formed by the aforementioned series of assembling, does not give rise to the adhesion problem between the conductive diaphragm 3 and the conductor fixed electrode 5 in forming the air gap between the conductive diaphragm 3 and the conductor fixed electrode 5. As such, it is clear that it would not have been obvious for a skilled person to arrive at the subject matter of claim 1 from the teaching of Yasuno because Yasuno does not have the adhesion problem between the first electrode and the second electrode, and thus is silent about the solution thereto as disclosed in the present disclosure.

Based on the foregoing, Applicants respectfully submit that claim 1 and all claims dependent thereon are patentable over Yasuno.

Regarding claim 3, Applicants respectfully traverse the Examiner’s assertion that it is obvious that the first insulating film and second insulating film have tensile stress. First,

Applicants respectfully submit that the Examiner does not meet the burden of presenting a *prima facie* case because the Examiner fails to provide factual support of his *prima facie* conclusion of obviousness (see, M.P.E.P. § 2142). The Examiner provides no technical reasons that the film 34, 51 of Yasuno is necessarily an insulating film having tensile stress. Applicants respectfully submit that the Examiner fails to provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990).

Second, Applicants submit that paragraphs [0050] and [0053] of Yasuno do not provide any basis in fact and/or technical reasoning to support that the insulating films 34, 51 of Yasuno have tensile stress. These paragraphs of Yasuno disclose that the insulating films 34, 51 are made of various inorganic and organic materials, but fail to teach or suggest that the insulating films 34, 51 have a tensile stress. Further, since Yasuno does not involve the adhesion problem between the conductive diaphragm 3 and the conductor fixed electrode 5 in forming the air gap between the conductive diaphragm 3 and the conductor fixed electrode 5, there is no need to provide a tensile stress to the insulating films 34, 51. In contrast, the present subject matter of claim 3 exhibits an advantage that the tensile stress in the first insulating film 2 and the second insulating film 3 can ensure prevention of adhesion between the first electrode and the second electrode. As such, it is clear that claim 3 is patentable over Yasuno for its own merit in addition to the dependency upon claim 1.

Regarding claim 4, Applicants respectfully traverse the Examiner's assertion that providing silicon nitride material for the electret layer is known in the art. First, Applicants respectfully submit that the Examiner does not meet the burden of presenting a *prima facie* case

because the Examiner fails to provide factual support of his *prima facie* conclusion of obviousness (see, M.P.E.P. § 2142). The Examiner provides no technical reasoning why the film 34, 51 of Yasuno is necessarily made of silicon nitride film. Applicants respectfully submit that the Examiner fails to provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990).

Second, as discussed above, since silicon nitride has tensile stress, the subject matter of claim 4 exhibits the above mentioned advantage, which is not obtained in Yasuno.

Third, Applicants respectfully submit that it would not be well known in the art that silicon nitride is used as a dielectric layer of an electret, which needs to retain permanent electric charge, because silicon nitride retains less charge. As such, it is clear that claim 4 is patentable over Yasuno for its own merit in addition to the dependency upon claim 1.

Based on the foregoing, Applicants respectfully request that the Examiner withdraw the rejection of claims 1-10 under 35 U.S.C. § 103(a).

New Claims

Since new claims 11-18 depend upon claim 1, these claims are also patentable over Yasuno for at least the same reasons as claim 1. Also, since Yasuno fails to disclose the features of claims 11-18, these claims are patentable for their own merit in addition to the dependency upon claim 1.

CONCLUSION

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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